This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A method for the treatment of cancer comprising administering to a patient a therapeutically effective amount of a bone morphogenetic protein-2 activity inhibitor.

Claims 2 (original): The method of claim 1 wherein the bone morphogenetic protein-2 activity inhibitor is a polypeptide the binds specifically to bone morphogenetic protein-2.

Claim 3 (original): The method of claim 1 wherein the bone morphogenetic protein-2 activity inhibitor is a polypeptide that binds specifically to a bone morphogenetic protein-2 receptor.

Claim 4 (original): The method of claim 3 wherein the bone morphogenetic protein-2 receptor is a bone morphogenetic protein 1B receptor.

Claim 5 (canceled).

Claim 6 (currently amended): The method of claim 1 wherein the bone morphogenetic protein-2 activity inhibitor is human noggin of SEQ ID NO:4.

Claims 7-8 (canceled).

Claim 9 (currently amended): The method of claim 1 wherein the bone morphogenetic-2 activity inhibitor is a polypeptide the amino acid sequence of which comprises at least ten consecutive amino acids of human noggin of SEQ ID NO:4.

Claim 10 (canceled).

Claim 11 (original): The method of claim 1 wherein the bone morphogenetic protein-2 activity inhibitor is an antibody to bone morphogenetic protein-2.

Claim 12 (previously presented): The method of claim 1 wherein the bone morphogenetic protein-2 activity inhibitor is an antisense oligonucleotide that binds to a bone morphogenetic protein-2 nucleic acid sequence or portion thereof.

Claim 13 (canceled).

Claim 14 (original): The method of claim 1 wherein the cancer is a carcinoma.

Claim 15 (original): The method of claim 14 wherein the carcinoma is selected from the group consisting of bladder cancer, breast cancer, colon cancer, kidney cancer, lung cancer, ovarian cancer, thyroid cancer, endometrial cancer, omental cancer, testicular cancer, and liver cancer.

Claim 16 (original): The method of claim 1 wherein the cancer is lung cancer.

Claim 17 (original): The method of claim 1 wherein the patient is a human.

Claim 18 (original): The method of claim 1 wherein the bone morphogenetic protein-2 activity inhibitor further comprises a pharmaceutically acceptable carrier.

Claim 19 (original): The method of claim 18 wherein the bone morphogenetic protein-2 activity inhibitor is administered orally, enterically, intravenously peritoneally, subcutaneously, transdermally, parenterally, intratumorally, or rectally.

Claim 20 (original): A method for the treatment of cancer comprising administering to a patient a therapeutically effective amount of an expression vector having a nucleic acid sequence encoding a bone morphogenetic protein-2 activity inhibitor.

Claim 21 (original): The method of claim 20 wherein the expression vector further comprises a selective promoter that is operably linked to the nucleic acid sequence encoding a bone morphogenetic protein-2 activity inhibitor.

Claim 22 (original): The method of claim 21 wherein the selective promoter is carcinoembryonic antigen (CEA) promoter.

Claim 23 (original): The method of claim 20 wherein the bone morphogenetic protein-2 activity inhibitor is a polypeptide that specifically binds to bone morphogenetic protein-2.

Claim 24 (original): The method of claim 20 wherein the bone morphogenetic protein-2 activity inhibitor is a polypeptide that specifically binds to a bone morphogenetic protein-2 receptor.

Claim 25 (original): The method of claim 24 wherein the bone morphogenetic protein-2 receptor is bone morphogenetic protein 1B receptor.

Claim 26 (canceled).

Claim 27 (original): The method of claim 20 wherein the BMP-2 activity inhibitor is noggin.

Claim 28 (canceled).

Claim 29 (original): The method of claim 20, wherein the bone morphogenetic protein-2 activity inhibitor is a polypeptide the amino acid sequence of which comprises at least ten consecutive amino acids of noggin.

Claim 30 (canceled).

Claim 31 (original): The method of claim 20 wherein the cancer is a carcinoma.

Claim 32 (original): The method of claim 31 wherein the carcinoma is selected from the group consisting of bladder cancer, breast cancer, colon cancer, kidney cancer, lung cancer,

ovarian cancer, thyroid cancer, endometrial cancer, omental cancer, testicular cancer, and liver cancer.

Claim 33 (original): The method of claim 20 wherein the cancer is lung cancer.

Claim 34 (original): The method of claim 20 wherein the patient is a human.

Claim 35 (original): The method of claim 20 wherein the expression vector further comprises a pharmaceutically acceptable carrier.

Claim 36 (original): The method of claim 35 wherein the expression vector is administered orally, enterically, intravenously peritoneally, subcutaneously, transdermally, parenterally, intratumorally, or rectally.

Claim 37 (original): A method for the treatment of cancer comprising administering to a patient a therapeutically effective amount of an expression vector encoding an antisense oligonucleotide that binds to a bone morphogenetic protein-2 nucleic acid sequence.

Claim 38 (original): The method of claim 37 wherein the expression vector further comprises a selective promoter.

Claim 39 (original): The method of claim 38 wherein the expression vector is carcinoembryonic antigen (CEA) promoter.

Claim 40 (original): The method of claim 37 wherein the cancer is a carcinoma.

Claim 41 (original): The method of claim 37 wherein the carcinoma is selected from the group consisting of bladder cancer, breast cancer, colon cancer, kidney cancer, lung cancer, ovarian cancer, thyroid cancer, endometrial cancer, omental cancer, testicular cancer, and liver cancer.

Claim 42 (original): The method of claim 41 wherein the cancer is lung cancer.

Claim 43 (original): The method of claim 37 wherein the patient is a human.

Claim 44 (original): The method of claim 37 wherein the expression vector further comprises a pharmaceutically acceptable carrier.

Claim 45 (original): The method of claim 44 wherein the expression vector is administered orally, enterically, intravenously peritoneally, subcutaneously, transdermally, parenterally, intratumorally, or rectally.

Claim 46 (original): An article of manufacture comprising packaging material and, contained within the packaging material, a compound that is a bone morphogenetic protein-2 activity

inhibitor, wherein the packaging material indicates that the compound can be used for treating cancer in a patient.

Claim 47 (original): The article of manufacture of claim 46 wherein the cancer is a carcinoma.

Claim 48 (original): The article of manufacture of claim 46 wherein the carcinoma is selected from the group consisting of bladder cancer, breast cancer, colon cancer, kidney cancer, lung cancer, ovarian cancer, thyroid cancer, endometrial cancer, omental cancer, testicular cancer, and liver cancer.

Claim 49 (original): The article of manufacture of claim 46 wherein the cancer is lung cancer.

Claim 50 (original): A method for the diagnosis of cancer in a patient, comprising

obtaining a biological sample from a patient and

measuring the level of bone morphogenetic protein-2 in the biological sample, wherein an elevated level of bone morphogenetic protein-2 indicates cancer in the patient.

Claim 51 (original): The method of claim 50 wherein the cancer is a carcinoma.

Claim 52 (original): The method of claim 51 wherein the carcinoma is selected from the group consisting of bladder cancer, breast cancer, colon cancer, kidney cancer, lung cancer,

ovarian cancer, thyroid cancer, endometrial cancer, omental cancer, testicular cancer, and liver cancer.

Claim 53 (original): The method of claim 50, wherein the cancer is lung cancer.

Claim 54 (original): The method of claim 50 wherein the level of bone morphogenetic protein-2 is measured by an immunoassay.

Claim 55 (original): The method of claim 54 wherein the immunoassay is selected from the group consisting of Enzyme Linked Immunosorbent Assay (ELISA), Western blot, immunoprecipitation, in situ immunohistochemistry, and immunofluorescence.

Claim 56 (original): The method of claim 50 wherein the assay used to measure the level of bone morphogenetic protein-2 is Enzyme Linked Immunosorbent Assay (ELISA).

Claim 57 (original): The method of claim 50, wherein the biological sample is selected from a group consisting of blood, blood serum, urine, sputum, synovial fluid, ascites, and tissue.

Claim 58 (original): The method of claim 50 wherein the biological sample is blood serum.

Claim 59 (original): A method for the diagnosis of cancer in a patient, which method comprises detecting the overexpression of

bone morphogenetic protein-2 in the patient, the overexpression of bone morphogenetic protein-2 indicating the presence of cancer, the method comprising the steps of:

(i) quantifying *in vivo* or *in vitro* the presence of bone morphogenetic protein-2 in a patient or a biological sample obtained from a patient;

(ii) comparing the result obtained in step (i) to that of a normal, non-cancerous patient; and

(iii) diagnosing for the presence of cancer based on an increased level of bone morphogenetic protein-2 in step (ii) relative to a normal, non-cancerous patient.

Claim 60 (original): The method of claim 59 wherein the cancer is a carcinoma.

Claim 61 (original): The method of claim 60 wherein the carcinoma is selected from the group consisting of bladder cancer, breast cancer, colon cancer, kidney cancer, lung cancer, ovarian cancer, thyroid cancer, endometrial cancer, omental cancer, testicular cancer, and liver cancer.

Claim 62 (original): The method of claim 59 wherein the cancer is lung cancer.

Claim 63 (original): The method of claim 59 wherein the bone morphogenetic protein-2 is quantified by immunoassay.

Claim 64 (original): The method of claim 59 wherein the bone morphogenetic protein-2 is quantified by Enzyme Linked Immunosorbent Assay (ELISA).